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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/935,089  | 08/22/2001  | Naoyuki Mochida      | 33871               | 9338             |
| 116   | 7590        | 09/20/2004           | EXAMINER            |                  |
| PEARNE & GORDON LLP<br>1801 EAST 9TH STREET<br>SUITE 1200<br>CLEVELAND, OH 44114-3108 |             |                      | WOZNIAK, JAMES S    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2655                |                  |

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/935,089

Applicant(s)

MOCHIDA ET AL.

Examiner

James S. Wozniak

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 8/22/2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/22/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/22/2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. **Claims 11-13** are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, claims 11-13 have not been further treated on the merits.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-3** are rejected under 35 U.S.C. 102(e) as being anticipated by Kramer et al (U.S. Patent: 6,658,027)

With respect to **Claim 1**, Kramer discloses:

A packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length (*receiver, Col. 3, Lines 31-52, and Fig. 1, Element 100*);

A jitter-absorbing buffer for temporarily storing the real-time information packet received by said packet receiving unit (*jitter buffer*, Col. 3, Lines 53-61, and Fig. 1, Element 120);

A decoding unit for decoding data stored in said jitter absorbing buffer (*vocoder*, Col. 3, Line 61- Col. 4, Line 2, and Fig. 1, Element 130);

Packet number judging means for measuring a total number of packets stored in said jitter absorbing buffer and for comparing said measured total packet number with a preset threshold value, and also for notifying the comparison result to data discarding means (*detection of whether a jitter buffer is full*, Col. 7, Lines 61-63); and

Data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer based upon the comparison result of said packet number comparing means (*frame deletion*, Col. 7, Lines 61-63, and *jitter buffer manager*, Fig. 1, Element 140).

With respect to **Claim 2**, Kramer discloses:

A packet receiving unit for receiving a real-time information packet which is transmitted at a constant coding speed, while having a constant packet length (*receiver*, Col. 3, Lines 31-52, and Fig. 1, Element 100);

A jitter absorbing buffer for temporarily storing the real-time information packet received by said packet receiving unit; a decoding unit for decoding data stored in said jitter absorbing buffer (*jitter buffer*, Col. 3, Lines 53-61, and Fig. 1, Element 120);

Packet number judging means for measuring a total number of packets stored in said jitter absorbing buffer and for comparing said measured total packet number with a preset threshold value, and also for notifying the comparison result to a continuation monitoring timer (*detection of whether a jitter buffer is full*, Col. 7, Lines 61-63); and

A continuation monitoring timer for judging as to whether or not such a time period during which said comparison result of said packet number judging means exceeds a threshold value is continued over a predetermined threshold value, and for notifying such a fact that said time period is continued over said predetermined threshold value to data discarding means (*water mark representing a delay length of a jitter buffer, Col. 8, Lines 21-26, and Col. 5, Lines 51-67*); and

Data discarding means for discarding either a portion or all of the packets stored in said jitter absorbing buffer based upon the comparison result of said continuation monitoring timer (*Col. 5, Lines 51-67*).

**Claim 3** contains subject matter similar to Claim 1, and thus, is rejected for the same reasons. Furthermore, Kramer teaches that an entire communication sequence consisting of a plurality of frames is processed before transmission (*Col. 3, Lines 31-52*).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 4-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al in view of Saito et al (*U.S. Patent: 5,541,926*).

With respect to **Claim 4**, Kramer teaches the jitter buffer management system featuring frame deletion means, as applied to Claim 3. Kramer does not teach a timer for outputting a time-up signal after a predetermined time period has passed from a time instant when a first packet is received, however Saito discloses:

A timer for outputting a time-up signal after a predetermined time period has passed from a time instant when a first packet is received, or said data is decoded for the first time since the communication has been commenced; and the data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer (*jitter absorption timer, Col. 25, Lines 48-61*).

Kramer and Saito are analogous art because they are from a similar field of endeavor in jitter buffer management. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the use of a timer in removing data from a jitter buffer as taught by Saito with the jitter buffer management system featuring frame deletion means as taught by Kramer to provide a further means of preventing buffer overflow by further implementing a frame count check after a predetermined time period over which buffer congestion may occur. Therefore, it would have been obvious to combine Saito with Kramer for the benefit of obtaining a further means of preventing jitter buffer overflow by analyzing a frame count after a predetermined period of time.

With respect to **Claim 5**, Kramer further recites:

Data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer in the unit of a packet (*frame deletion, Col. 5, Lines 51-67, and Col. 7, Lines 61-63*).

With respect to **Claim 6**, Kramer additionally suggests:

Data discarding means discards either a portion or all of the packets stored in said jitter absorbing buffer in the unit of a byte (*discarding a frame portion, Col. 11, Line 66- Col. 12, Line 1*).

Although Kramer does not specifically suggest discarding a frame portion in the unit of a byte, the examiner takes official notice that a byte is a well-known subunit that comprises a data frame. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to delete a frame portion in the unit of a byte so as to provide a well-known data unit for partial frame deletion, thus conserving additional valuable (speech) data that a frame may contain.

With respect to **Claim 7**, Kramer further recites:

Data discarded by said data discarding means corresponds to such data that may give a small adverse influence to a transmission quality when being discarded (*deletion of silence frames, Col. 4, Lines 16-34*).

With respect to **Claim 8**, Kramer additionally discloses:

Real-time information packet corresponds to a voice packet (*VoIP, Col. 3, Lines 53-61*);  
and

The data-discarding unit is comprised of: a non-voice portion-detecting unit for detecting a non-voice portion of voice information stored in said jitter absorbing buffer and a discarding unit for discarding either a portion or all of said detected non-voice portions; and said data discarding means discards only the detected non-voice portion when the data discarding

operation is carried out (*voice activity detector and deletion of silence frames, Col. 4, Lines 16-34, and Col. 5, Lines 51-67*).

With respect to **Claim 9**, Kramer further recites:

Non-voice portion detecting unit notifies information as to such a non-voice portion which should be discarded within said detected non-voice portions to said discarding unit; and said discarding unit discards only said notified non-voice portion (*VAD sending a silence detection result to a jitter buffer manager, Col. 4, Lines 16-34, and Col. 5, Lines 51-67*).

With respect to **Claim 10**, Kramer additionally discloses:

Non-voice portion detecting unit divides said detected non-voice portion by using a block having a preselected fixed length as a dividing unit, and notifies such a block except for a head block thereof and a tail block thereof as said block which should be discarded to said discarding unit (*detecting and deleting only a silence portion from a frame, Col. 11, Line 66- Col. 12, Line 4, which would inherently require a silence portion dividing means. Also, since only a silence portion would be deleted, it would be inherent that the header and tail block of the frame would be retained.*).

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:




- Hatono et al (*U.S. Patent: 5,914,936*)- teaches a system for congestion control of a buffer that utilizes a congestion threshold time comparison for setting a flow restriction.
- Scott (*U.S. Patent: 6,665,317*)- teaches a jitter buffer management system that deletes silence packets when a buffer size threshold is exceeded.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669 and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-Fridays, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached at (703) 305-4827. The fax/phone number for the Technology Center 2600 where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 306-0377.

James S. Wozniak  
8/4/2004

  
SUSAN MCFADDEN  
PRIMARY EXAMINER